

HEXA-COVER®
SELECTION OF REFERENCES
THE AMERICAS

Certified for use with
potable water according
(AS/NZS 4020:2018)

HEXA-COVER®
MANUFACTURED IN
NORTH AMERICA
AUSTRALIA
EU

Brazil

Holambra, SP: 3.500 m² water reservoir (irrigation)
 Rio Grande du Sul: wastewater (petrochemical)
 Sao Paulo: industrial wastewater

Antofagasta: total of 26.000 m² water storage
 BioBio: 2.500 m² wastewater facility
 ConCon: 2.700 m² wastewater facility
 Iquique: total of 36.000 m² water storage ponds
 Iquique: 3.000 m² water storage facility
 Lomas Bayas: 6.400 m² tailings ponds
 Lomas Bayas: 15.000 m² tailings ponds
 Santiago: industrial wastewater (refinery)
 Santiago: 2.400 m² Industrial wastewater
 Tarapacá, Chile: 5.000 m² ILS, PLS
 Tarapacá, Chile: 2.400 m² water storage facility

Chile



A total of 115.000 m² slurry lagoons for controlling odor and emission

Ecuador

New Quito International Airport:
 Water recovery reservoir (Bird deterrent, controlling evaporation and organic growth)



Mexico

104.000 m² tailing pond (controlling evaporation)



Canada

Close to 3.000 installations for the Hexa-Cover® Oil & Gas technology has been deployed, for i.e.:

- * Reduce tank vent emissions
- * Lower tank head space vapour load burdens
- * Reduce water vapour
- * Reduce heat loss
- * Insulation for liquid surfaces
- * Reduce offensive and carcinogenic BTEX odours
- * Reduce expensive defoaming chemicals
- * Reduce energy consumption

Other projects, Canada:

- BC: wastewater tank
- Cremona, AB: wastewater tank
- Markham, ON: wastewater tank
- Macoah, BC: 1.000 m² wastewater / WWTP
- Millbrook, ON: wastewater tank
- Saskatoon, City of, BC: 4.000 m² wastewater pond
- Salluit, QC: Gasoline tank
- Toronto, ON: 4.000 m² effluent lagoon
- Truro, NS: Process water (dairy)

City of Nakusp, BC
4.000 m² WWTP reservoir (evaporation and organic growth)

"Mike Pedersen, Director of Operations for Nakusp, looked at alternative solutions to control the massive amounts of algae in the pretreatment lagoon.

"Familiar with the Hexa-Cover® Floating Cover, he felt the product could nicely cover the lagoon, controlling the algae growth as the sunlight would not be able to penetrate into the water.

Additionally, the Hexa-Cover® Floating Cover would enable the aeration process and fluctuating water levels to continue"

Hexa-Cover® is manufactured in North America, Australia and EU

Hexa-Cover® Floating Cover qualifies for EQIP-funding



USA

Alexandria, LA: 74.000 sqft / 6.875 m² wastewater reservoirs)

Algona, IA: Industrial wastewater

Bedford, IN: Industrial wastewater

CA 95469: Water storage facility

Canton, OH: Industrial wastewater

Clarksburg, WV: 4.730 m² Frac Water Tank

Cleveland, OH: Industrial wastewater

CO: 5 Frac Water Tanks

Dakota, IL: Industrial wastewater

Dallas, OR: Water storage tank

Dallas, WV: 2.315 m² Frac Water Tank

DeBuque, CO: 10.500 m² Water Storage

Dickson County, TN: Sedimentation tank

Emporia, KS: Industrial wastewater

Francesville, IN: Industrial wastewater

Gallatin, TN: Municipal wastewater

Henderson, KY: Industrial wastewater

Houston, TX: Industrial wastewater

Green Bay, WI: 2.185 m² Deicing Storage Pond
(Austin Straubel International Airport)

Green River, WY: Industrial wastewater

Jackson, OH: Industrial wastewater

Kanab, UT: Water tank (wildlife)

Laurel, MD: Industrial wastewater

Lewis Run, PA: Water storage facility

La Porte, TX: Contaminated water

Mesa Verde, CA: Water storage facility

Medaryville, IN: Industrial wastewater

Milkford, OH: 1.950 m² Wastewater reservoir

Monaca, PA: Industrial wastewater

Monroe, WI: 1.235 m² equalization tank

Moorhead, MN: Water storage facility

Pacheco, CA: 1.800 m² water reservoir

Port Arthur, Texas: Water Storage Tank

Piketon, OH: Water storage facility

Port Arthur, TX: 2 x water storage facility

Princeton 08540, NJ: water storage tank

Springfield, PA: Water storage facility

Sonora, CA: Wastewater

St. Croix, USVI: 3.000 m² Storage Facility



Austin Straubel International Airport

Green Bay, WI

2.185 m² Deicing Storage Pond

The Austin Straubel International Airport required a new cover for its open water storage pond, which is used for deicing and storm water retention.

Critical to the operation of the airport, the open water pond requires a cover to serve as a bird deterrent and to protect wildlife from the toxicity of glycol.

In addition, the glycol and other chemicals used in the airport maintenance generate strong odors which also need to be controlled.

The unique Hexa-Cover® offers unique features for odor control, algae control, evaporation control and heat retention. The patented design incorporates hexagonal discs constructed of 100% recycled polypropylene with interlocking edges and a buttressed profile that allows for self-leveling, adjustment and dispersion ensuring maximum surface area coverage in all conditions.

The cover was installed with minimal time, cost and equipment, providing almost instant coverage.



Installed in less than 4 hours, bags of discs were emptied into the basin and the cover immediately began serving as a bird deterrent, eliminating odors and keeping wildlife from coming in contact with potentially harmful de-icing fluids.

When the pond level fluctuates, the tiles lay on the pond slopes and bottom until the water level rises again.

What could have been a major problem is now a worryfree operation thanks to the Hexa-Cover® System.



Agriculture

Bob Heers, Owatonna, MN
Slurry lagoon / Controlling odor and emission

"We have found the Hexa-Cover® to be a simple and effective solution for covering our manure pit.

The individual tiles disperse across the entire surface and align themselves to form a free floating cover that requires no maintenance or upkeep.

Our experience leads us to believe that this cover is virtually indestructible and will have an extremely long lifespan"



Triple E Farms, IL
Slurry tank / Controlling odor and emission

"I installed the Hexa-Cover® Floating Cover on my new 67' diameter Slurrystore in June 2009. It spread out just like the company video shows! I have another Slurrystore that I try to maintain a straw bio-cover on.

The Hexa-Cover® Floating Cover structure has less odor because its surface is almost completely covered while some of the straw has sunk or moved in my other structure. The straw also adds to the solids in the structure.

David Erickson, IL

"The Hexa-Cover® Floating Cover looks like they will last a long time. I believe that over time, the Hexa-Cover® Floating Cover will be more economical and more effective than a bio-cover.

Unlike a bio-cover or fabric cover, the Hexa-Cover® Floating Cover should also be maintenance free for many years"

Napa Berryessa Resort, CA

Wastewater (odor and organic growth)

Napa Berryessa Resort Improvement, chose Hexa-Cover® Floating Cover for a wastewater application for controlling odor, algae and evaporation

Hexa-Cover® Floating Cover is installed at Lake Berryessa Wastewater Treatment plant, 1465 Steele Canyon Road, Napa. The application is to cover two concrete equalization basins.

Process:

Raw sewage from homes and resort, flow from gravity and lift stations into headwork's Lakeside Spiral Screen, screened water into two equalization basins with Hexa-Cover® Floating Cover, then to Ovivo MBR, to effluent basin or alternate overflow basin, then pumped to reservoir off site for land application.

Plant flow capacity approximately 30,000 GPD now and at build out 60,000 GPD.

"The visit to the plant was a bit amazing. There was no odor from the "Hexa-Covered" EQ Basins. These EQ basins have very high odor potential and algae potential because of the heavy nutrients coming off the screen. There was no algae, the discs as advertised interlocked, they floated up and down with no problem, and could not help but reduce evaporation.



A solid cover presented safety issues, the discs did not. Summit Engineers was going to put aeration in these basins but saw a sample of the Hexa-Cover® product, called references then recommended the Hexa-Cover® installation. It penciled out better than aeration. That was important to this design build project, which Western Water Constructors, Inc. did with Summit.

Adjacent to these equalization basins are the effluent basin and overflow basin. These two basins were covered with algae.

The point; the Hexa-Cover® Floating Cover eliminates algae!

As proof, side by side basins, same plant, same time, two "Hexa-Covered" basins without algae and two uncovered basins with heavy algae. Also, no odor from the EQ basins.

The discs arrived in large sacks. Installation was simple; they simply dumped the discs into the basins. Installation was less than an hour. Contrast that to an aeration system"

Australia

Bairnsdale, VIC	water storage
Bemm River, VIC	2.000 m ² raw water
Brisbane, QLD	1.100 m ² water reservoir
Brisbane QLD	water storage
Fraser Island	wastewater tank
Gayndah, QLD	water storage
Gippsland, Vic	water storage facility
Lake Clarendon, QLD	1.600 m ² irrigation water
Laverton, VIC	water storage
Laura, QLD	water storage
QLD:	11.000 m ² water storage
Omeo, VIC	4.300 m ² raw water
Townsville, QLD	water storage
Yeppon, QLD	water Storage Facility
WA:	2.300 m ² water reservoir



Water Corporation Western Australia, 6000 Perth
2.000 m² wastewater reservoir

"Water Corporation (WA) installed Hexa-Cover® in a wastewater treatment pond in Leonora, Goldfield Region.

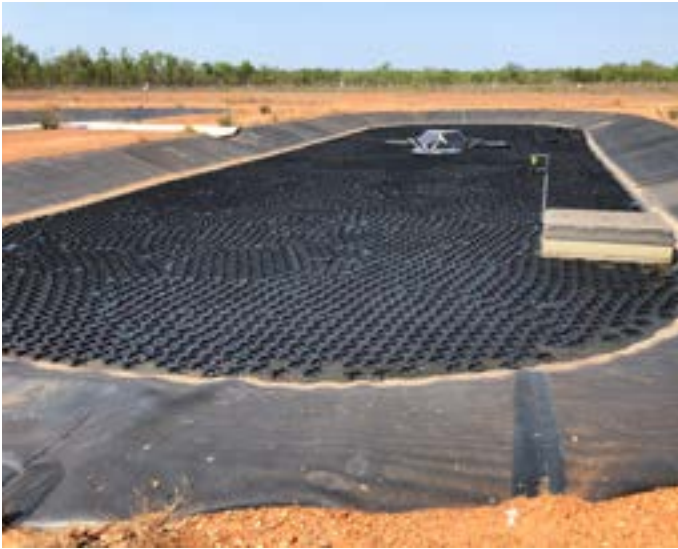
We are happy to say, the installation went very smoothly.

To date the effluent quality supplied to the recycled water scheme is much improved as well as the quantity"

Leanne Brown, Analyst – Water Quality Risk



Effective coverage for all fluids



New Zealand

Northland: 7.000 m² aerated wastewater lagoon

South Island: 1.040 m² sewage treatment pond

Better Water and More of It

Jaymie Dawes at Omeo WTP Raw Water Storage Reservoir

The Omeo WTP raw water storage reservoir draws water from Butchers Creek which has had issues with algae growth in the past. Algae would be carried from the river into the lined reservoir above the plant. The algae make the water more difficult to treat to potable water standards.

Unwanted nutrients from ducks and wildlife accessing the reservoir also compounded the algae problem. As a result, the reservoir required regular emptying and cleaning, to mitigate the effects of algae on water quality and treatment.

Aiming to reduce reservoir maintenance and the intensity of treatment required, a thorough assessment of available reservoir covers was performed. Critical factors included capital cost, maintenance cost, and effectiveness in reducing UV penetration (thereby limiting growth of algae).

In this case significant evaporation reduction was seen as an added benefit rather than a critical factor.

Hexa-Cover® R114 tiles were determined as the preferred technology and were used to cover the raw water reservoir at Omeo WTP. Installation was achieved by pouring shipping containers of the tiles into the reservoir.

East Gippsland Water's Coordinator Environmental Services, Jaymie Dawes says the results of installing Hexa-Covers at Omeo have been positive.

"We installed 108,000 Hexa-Cover discs in June 2017, and since have seen a notable reduction in algae growth and E.coli in our raw water storage, which makes the water much easier to treat. We are now well into the third summer since installation and the reservoir has not needed to be emptied or cleaned."

The hexagonal tiles float freely on the water surface and arrange themselves in a grid that self-compensates for different reservoir shapes and varying water levels. The small size of the tile is an effective deterrent to waterfowl.

Up to 99% coverage of the surface area can be achieved, resulting in reduced evaporation, reduced contamination (from multiple sources) and improved water quality.

Even in situations where there are exposed surface areas as the tiles blow in the wind, water quality improvements appear unaffected.



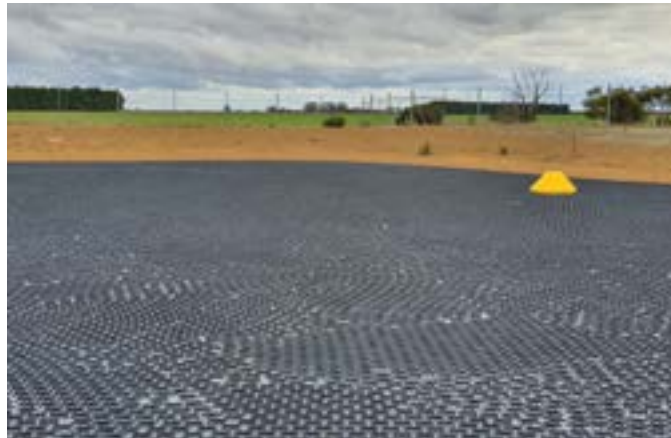
Better Water and More of It

Hexa-Cover® at Omeo WTP (Raw Water Storage Reservoir) – The Results Are In!

In June 2017 East Gippsland Water installed Hexa-Cover® modular covers on the raw water reservoir at Omeo water treatment plant, with the aim of controlling algae which was sometimes carried in from the water source.

This was achieved with great success, making the water easier to treat and eliminating the regular emptying and cleaning of the reservoir which was previously required. More details of the installation can be found in the February 2020 edition of Operator.

To quantify the effect of the Hexa-Cover®, thorough testing of water from the reservoir continued and was compared with results from the 2 years prior to installation.



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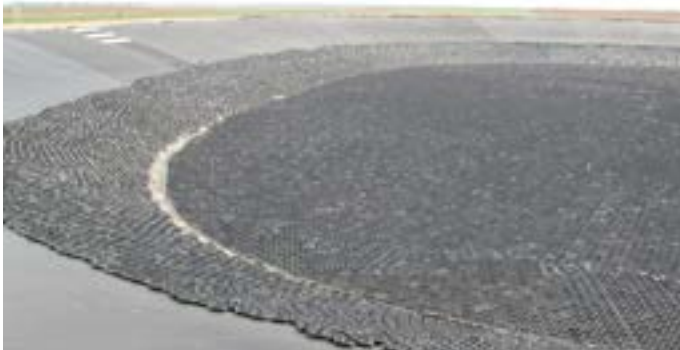
The small size of the tile is an effective deterrent to waterfowl (leading to reduction of E.coli).

Up to 99% coverage of the surface area can be achieved, resulting in reduced evaporation, reduced contamination (from multiple sources), improved water quality and reduced operational & maintenance costs.

The effects are described and quantified by East Gippsland Water as follows:

Measured Parameter Effect:

Total Biovolume	95% Reduction
Potentially Toxic Biovolume	98% Reduction
E.coli	89% Reduction
Coliforms	Dramatic Reduction
Turbidity	57% Reduction
pH	Less variation
Water Temperature	Negligible Effect



For more information

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